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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,999	01/11/2005	Taisei Matsumoto	TIP-04-1329	7280

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IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP
1650 MARKET ST
SUITE 4900
PHILADELPHIA, PA 19103

EXAMINER	
BOYKIN, TERRESSA M	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/517,999	MATSUMOTO ET AL.	
	Examiner	Art Unit	
	Terressa M. Boykin	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/04;8/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United

Claims 1-15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 8253665 see abstract and translation provided; or EP 980894 see abstract and pages 2-5.

JP 8253665 discloses an antistatic polylactate composition (I) comprises: (A) polymer mainly composed of lactate unit; and (B) block copolymer(s) composed of: (B1) polyalkylene ether block(s); and (B2) polylactate block(s); where (B)/(I) = 0.3-50 wt.%.

Specifically, this composition is a mixture composed of (A) a polymer mainly containing lactic acid [preferably, a polylactic acid of a copolymer containing a lactic acid-derived component of ≥50wt.% in the polymer] and (B) a block copolymer composed of (i) a polyalkylene ether and (ii) a polylactic acid, wherein the weight ratio of the component B is 0.3-50wt.%, preferably 0.5-30wt.%. Further, the component (i) is preferably at least the one selected from a polyethylene glycol, a polypropylene glycol and their copolymer, and the weight ratio of the component (i) is preferably 70-95wt.% in the component B. Furthermore, the component B preferably has a volume resistivity of ≤1×1010Ω.cm and a molecular weight of ≥10000.

Moldings of composition (I) include fibers, fabrics, knits, nonwoven fabrics, papers, nets, ropes, films, sheets, plates, rods, tubes, and containers.
Note that the composition (I) gives moldings with good antistatic properties, improved flexibility, impact resistance, good appearance and transparency.

EP 980894 discloses a polylactic acid-based resin composition composed of a high molecular ingredient (A) comprising polylactic acid (a1) and an aliphatic polyester (B), and a film, particularly an inflation film, prepared from the resin composition. The film comprising the polylactic acid-based resin composition of the invention is biodegradable and excellent in flexibility and resistance to blocking of film and

bleeding-out of plasticizer, has no anisotropy in tear strength, and can be suitably used for an agricultural multi-film and garbage bag. When the film of the invention is used for food wrapping, the film prevents fungus growth and contamination of color or odor, and thus can be suitably used.

Claims 1 -17 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6114495 see abstract and cols. 1-5.

US 6114495 discloses a polylactide polymer composition of the invention can include additional components or additives in addition to the above-described stabilizing agents. These additional components include plasticizers, nucleating agents, fillers, surface treatments, surfactants, pigments, catalysts, finishing oils, lubricants, rheology modifiers, crystallinity modifiers, and antioxidants.

For most polylactide polymer compositions, it is believed that the glass transition temperature can be lowered to desirable levels by adding a plasticizer component to provide a concentration of about 0.5 to 20 percent by weight plasticizer, based on the weight of the polymer composition. Generally, a sufficient amount of plasticizer should be incorporated to provide a desired reduction in T.sub.g. It is believed that the plasticizer level should be above at least 1 percent by weight, and more preferably above at least 2 percent by weight, to provide sufficient flexibility and softness. Accordingly, the plasticizer should be included to provide a concentration level of about 1 to 10 percent by weight.

The reference acknowledges that in general, many biodegradable polymers such as non-plasticized polylactic acid polymers are generally too brittle for use as single layer flexible films and/or sheets. Their T.sub.g is generally above 50.degree. C., and it has been observed that they provide a film or sheet having low impact resistance and tear resistance. Tear resistance of a typical polylactide film having a T.sub.g above 50.degree. C. is less than about 6 gmf /mil. Other biodegradable polymers, including certain aliphatic polyesters, exhibit poor tear strength. These physical properties render films or sheets prepared therefrom poor candidates for use as bags or wrappers. Articles such as trash bags, grocery bags, food wrappings, and the like should be flexible and resistant to tearing and puncturing.

The reference has discovered that by lowering the glass transition temperature (T.sub.g) of biodegradable polymers to about 20.degree. C. or less, it is possible to provide a film or sheet having improved flexibility and tear and puncture resistance. More preferably, it is desirable to lower the T.sub.g to below about 5.degree. C., and more preferably below about minus 10.degree. C. These glass transition temperature should be below the temperature at which the polymer is used. When the biodegradable polymer is a lactic acid residue containing polymer, a preferred method for lowering the glass transition temperature (T.sub.g) is by adding plasticizer thereto. Plasticizer can be added to a polylactide polymer to lower the glass transition temperature (T.sub.g) from

60.degree. C., without plasticizer, to 19.degree. C. at a level of 20 percent, by weight, plasticizer.

Claims 1 -17 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5849401 see abstract and cols. 1-4 and claims.

US 5849401 discloses a compostable multilayer film includes a core layer having a first surface and a second surface, a first blocking reducing layer covering the first surface of the core layer, and a second blocking reducing core layer comprises a lactic acid residue-containing polymer having a glass transition temperature (Tg) below 20.degree. C. The first and second blocking reducing layers comprise a semicrystalline aliphatic polyester. The hydrolyzable polymer and have a T.sub.g above about 50.degree. C. The multilayer structure can be used for preparing bags and wrappers.

Each of the references discloses a poly lactic acid polymer having good stretchability, which may be used for package wrapping as claimed by applicants. Any properties or characteristics inherent in the prior art, e.g. tensile modulus, heat resistance, film haze or adhesion, although unobserved or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Since the disclosed molecular weights are expressed differently and thus may be distinct from those claimed, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious. In view of the above, there appears to be no significant difference between the reference(s) and that, which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07205278 see abstract and claims.

JP 07205278 discloses a film having practical strength from a polylactic acid polymer having biodegradable properties. A non-stretched sheet of a polylactic acid polymer is longitudinally stretched at stretching temp. of 50-90°C within a stretching magnification of 1.5-5 times so that the degree (Ana of in-plane orientation becomes a range of 3.0×10-3-30×10-3 and subsequently laterally stretched at stretching temp. of 50-80°C within a stretching magnification range of 1.5-5 times to produce a sequential biaxially stretched film. After biaxial stretching, if the biaxially stretched film is heat-treated within a temp. range of 70°C-(m.p. of polymer), the thermal dimensional stability thereof is enhanced. By this constitution, the brittleness of the film is improved and stretching processing can be stably performed.

Thus, the reference discloses a stretched film polylactic acid polymer as claimed by applicants except for specifically stating that the film may be used for packaging wrap. However, the characteristics disclosed, i.e. stretching, strength etc. would be advantageous for the use for wrapping an object. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film as a packaging wrap since a film "inherently" covers an object and the films characteristics would advantageously lend itself as a wrap.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov <http://www.uspto.gov>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is **(571-272-1700).**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

Examiner Terressa Boykin
Primary Examiner
Art Unit 1711